

WHAT IS CLAIMED IS:

- SUB A17
1. An electronic catalog maintenance system, comprising:
 - a dictionary database configured to store dictionary data of an electronic catalog, the dictionary data being given in a form of a tree structure formed by identifiers for uniquely identifying classes classifying products and attributes of the products;
 - an editing unit configured to edit the dictionary data stored by the dictionary database by making changes including standard changes defined by a prescribed standard and out-of-standard changes not defined by the prescribed standard;
 - a change status detection unit configured to detect a status of each change made by the editing unit, and to generate an identifier change data indicating the status of each change made by the editing unit and updates of identifiers to be made in the dictionary data;
 - an identifier update unit configured to issue a new identifier of each class or attribute created by an out-of-standard change made by the editing unit, and to retire an old identifier of each class or attribute deleted by an out-of-standard change made by the editing unit, according to the identifier change data generated by the change status detection unit; and
 - an identifier change database configured to store the identifier change data generated by the change status detection unit.
 2. The system of claim 1, wherein the change status detection unit generates the identifier change data that indicates the updates of identifiers to be made such that both new identifiers and old identifiers can be used in accessing the classes and the attributes after updating by the identifier update unit, by referring to the identifier

change data stored in the identifier change database.

3. The system of claim 1, wherein the editing unit makes the standard changes in forms of version/revision updates defined by ISO13584 standard, and the out-of-standard changes not defined by ISO13584.

4. The system of claim 1, wherein the change status detection unit detects the status of each change made by the editing unit according to occurrences of version/revision updates, issuance of the new identifier, and retirement of the old identifier.

5. The system of claim 1, further comprising:
a summary generation unit configured to simplify the identifier change data by deleting any redundant portion from the identifier change data generated by the change status detection unit;
wherein the identifier change database stores the identifier change data as simplified by the summary generation unit.

6. The system of claim 1, further comprising:
a quality check unit configured to generate a dictionary system quality data by evaluating qualities of the dictionary data as a whole and each element constituting the dictionary data according to prescribed quality check rules, after the dictionary data are edited by the editing unit;
wherein the identifier change database also stores the dictionary system quality data generated by the quality check unit.

7. The system of claim 1, wherein the dictionary database includes:

an editing dictionary database for storing a version of the dictionary data for which editing operations are in progress; and

a master dictionary database for storing a version of the dictionary data for which the editing operations are completed.

8. The system of claim 1, wherein the identifier change database includes:

10 an editing identifier change database for storing the identifier change data corresponding to a version of the dictionary data for which editing operations are in progress; and

15 a master identifier change database for storing the identifier change data corresponding to a version of the dictionary data for which the editing operations are completed.

SUB A27
20 9. An electronic catalog maintenance method, comprising the steps of:

(a) storing dictionary data of an electronic catalog in a dictionary database, the dictionary data being given in a form of a tree structure formed by identifiers for uniquely identifying classes classifying products and attributes of the products;

(b) editing the dictionary data stored by the dictionary database by making changes including standard changes defined by a prescribed standard and out-of-standard changes not defined by the prescribed standard;

30 (c) detecting a status of each change made by the step (b), and generating an identifier change data indicating the status of each change made by the step (b) and updates of identifiers to be made in the dictionary data;

(d) issuing a new identifier of each class or attribute
35 created by an out-of-standard change made by the step (b),

and releasing an old identifier of each class or attribute deleted by an out-of-standard change made by the step (b), according to the identifier change data generated at the step (c); and

- 5 (e) storing the identifier change data generated by the step (c) in an identifier change database.

10 10. The method of claim 9, wherein the step (c) generates the identifier change data that indicates the updates of identifiers to be made such that both new identifiers and old identifiers can be used in accessing the classes and the attributes after updating by the step (d), by referring to the identifier change data stored in the identifier change database.

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11. The method of claim 9, wherein the step (b) makes the standard changes in forms of version/revision updates defined by ISO13584 standard, and the out-of-standard changes not defined by ISO13584.

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12. The method of claim 9, wherein the step (c) detects the status of each change made by the step (b) according to occurrences of version/revision updates, issuance of the new identifier, and retirement of the old identifier.

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13. The method of claim 9, further comprising the step of: (f) simplifying the identifier change data by deleting any redundant portion from the identifier change data generated by the step (c);

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wherein the step (e) stores the identifier change data as simplified by the step (f) into the identifier change database.

14. The method of claim 9, further comprising the step of:
35 (g) generating a dictionary system quality data by

evaluating qualities of the dictionary data as a whole and each element constituting the dictionary data according to prescribed quality check rules, after the dictionary data are edited by the step (b);

- 5 wherein the step (e) also stores the dictionary system quality data generated by the step (g) in the identifier change database.

15. The method of claim 9, wherein the step (a) stores a
10 version of the dictionary data for which editing operations are in progress, into an editing dictionary database of the dictionary database; and

the method further comprises the step of storing a
version of the dictionary data for which the editing
15 operations are completed, into a master dictionary database of the dictionary database.

16. The method of claim 9, wherein the step (e) stores the
20 identifier change data corresponding to a version of the dictionary data for which editing operations are in progress, into an editing identifier change database of the identifier change database; and

the method further comprises the step of storing the
identifier change data corresponding to a version of the
25 dictionary data for which the editing operations are completed, into a master identifier change database of the identifier change database.

SUB A37

17. A computer usable medium having computer readable
30 program codes embodied therein for causing a computer to function as an electronic catalog maintenance system, the computer readable program codes include:

a first computer readable program code for causing
said computer to store dictionary data of an electronic
35 catalog in a dictionary database, the dictionary data being

given in a form of a tree structure formed by identifiers for uniquely identifying classes classifying products and attributes of the products;

5 a second computer readable program code for causing said computer to edit the dictionary data stored by the dictionary database by making changes including standard changes defined by a prescribed standard and out-of-standard changes not defined by the prescribed standard;

10 a third computer readable program code for causing said computer to detect a status of each change made by the editing unit, and to generate an identifier change data indicating the status of each change made by the editing unit and updates of identifiers to be made in the dictionary data;

15 a fourth computer readable program code for causing said computer to issue a new identifier of each class or attribute created by an out-of-standard change made by the editing unit, and to retire an old identifier of each class or attribute deleted by an out-of-standard change made by the editing unit, according to the identifier change data generated by the third computer readable program code; and

20 a fifth computer readable program code for causing said computer to store the identifier change data generated by the third computer readable program code in an identifier change database.

18. The medium of claim 17, wherein the third computer readable program code generates the identifier change data that indicates the updates of identifiers to be made such that both new identifiers and old identifiers can be used in accessing the classes and the attributes after updating by the fourth computer readable program code, by referring to the identifier change data stored in the identifier change database.

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19. The medium of claim 17, wherein the second computer readable program code makes the standard changes in forms of version/revision updates defined by ISO13584 standard, and the out-of-standard changes not defined by ISO13584.

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20. The medium of claim 17, wherein the third computer readable program code detects the status of each change made by the second computer readable program code according to occurrences of version/revision updates, issuance of the
10 new identifier, and retirement of the old identifier.

~~21. The medium of claim 17, further comprising:
a sixth computer readable program code for causing
said computer to simplify the identifier change data by
15 deleting any redundant portion from the identifier change
data generated by the third computer readable program code;
wherein the fifth computer readable program code
stores the identifier change data as simplified by the
sixth computer readable program code in the identifier
20 change database.~~

~~22. The medium of claim 17, further comprising:
a seventh computer readable program code for causing
said computer to generate a dictionary system quality data
25 by evaluating qualities of the dictionary data as a whole
and each element constituting the dictionary data according
to prescribed quality check rules, after the dictionary
data are edited by the second computer readable program
code;
30 wherein the fifth computer readable program code also
stores the dictionary system quality data generated by the
seventh computer readable program code in the identifier
change database.~~

35 23. The medium of claim 17, wherein the first computer

readable program code stores a version of the dictionary data for which editing operations are in progress, into an editing dictionary database of the dictionary database; and

the computer readable program codes further includes
5 an eighth computer readable program code for causing said computer to store a version of the dictionary data for which the editing operations are completed, into a master dictionary database of the dictionary database.

10 24. The medium of claim 17, wherein the first computer readable program code stores the identifier change data corresponding to a version of the dictionary data for which editing operations are in progress, into an editing identifier change database of the identifier change
15 database; and

the computer readable program codes further includes an eighth computer readable program code for causing said computer to store the identifier change data corresponding to a version of the dictionary data for which the editing
20 operations are completed, into a master identifier change database of the identifier change database.

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